UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/494,714	01/31/2000	CHRISTOPHER H. GENLY	INTL-0341-US(P8391)	3825

7590 01/29/2004	EXAMINER
TIMOTHY N TROP	ARMSTRONG, ANGELA A

TIMOTHY N TROP
TROP PRUNER HU & MILES P C
8554 KATY FREEWAY
STE 100
HOUSTON, TX 77024

ART UNIT	PAPER NUMBER
2654	

DATE MAILED: 01/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Mailed

JAN 2 8 2004

Technology Center 2600

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Paper No. 11

Application Number: 09/494,714
Filing Date: January 31, 2000
Appellant(s): GENLY, CHRISTOPHER H.

Timothy Trop, Reg. No. 28,994
<u>For Appellant</u>

EXAMINER'S ANSWER

This is in response to the appeal brief filed September 29, 2003.

(1)   Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2)   Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or

be directly affected by or have a bearing on the decision in the pending appeal is contained in the

brief.

(3)   Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4)   Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in

the brief is correct.

(5)   Summary of Invention

The summary of invention contained in the brief is correct.

(6)   Issues

The appellant's statement of the issues in the brief is correct.

(7)   Grouping of Claims

Appellant's brief includes a statement that claims do not stand or fall together and

provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8)   Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9)   *Prior Art of Record*

6,075,575	SCHEIN ET AL	06-2000
6,009,398	MUELLER ET AL	12-1999
5,774,859	HOUSER ET AL	06-1998
5,715,320	ALLIE ET AL	02-1998
5,706,344	FINN	01-1998
5,815,580	CRAVEN ET AL	09-1998
5,566,271	TOMITSUKA ET AL	10-1996
5,265,014	HADDOCK	11-1993

(10)   *Grounds of Rejection*

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 12-14, 22-23 and 30 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Schein et al (US Patent No. 6,075,575), hereinafter referred to as Schein,

in view of Tomitsuka et al (US Patent No. 5,566,271), hereinafter referred to as Tomitsuka,

and further in view of Mueller et al (US Patent No. 6,009,398), hereinafter referred to as

Mueller.

As per claims 1, 14, 23, Schein et al. disclose a system/method comprising:

a speech recognizer that recognizes spoken requests for television programming

information, (see col. 6, lines 12-16);

an output device that generates response to spoken requests fro television

programming

information, (see Fig. 4A).

Schein fail to explicitly teach a system including a module coupled to said

recognizer to implement conversational speech. However, this feature was well known in

the art.

In a similar field of endeavor, Tomitsuka disclose a system comprising a voice

synthesis module for implementing conversational speech, (see Fig. 1, block 19).

Therefore, it would have been obvious to one of ordinary skill in the art at the time

the invention was made to use a voice synthesis module in Schein, as taught by Tomitsuka ,

for the purpose of using a voice synthesis in conjunction with a voice recognition module to

improve man-machine interaction, as suggested by Tomitsuka.

Additionally, Schein discloses a graphical user interface which provides information

in a visual form about television programming and a voice user interface which responds to

voice requests from the user ..., (see Fig. 4A and col. 6, lines 36-42).

Schein does not specifically disclose the graphical user interface and voice user interface communicating such that the focus of one is communicated to the other. However this feature was well known.

In a similar field of endeavor, Mueller discloses a system, which allows for user and system interaction via speech, visual and auditory interfaces. Specifically, at col. 4, line 56 continuing to col. 5, line 29, Mueller teaches implementation of a context analyzer which coordinates the speech interactions with the visual interface to accommodate how the user interacts with system when the user provides input via speech or via a text based graphical user interface.

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to implement interface focus communication as taught by Mueller, for the purpose of ensuring system performance when the user provides input via a visual or graphical user interface, as suggested by Mueller.

As per claim 12, Schein, Tomitsuka, and Mueller disclose everything as claimed in claim 1. Schein further disclose a system including a television coupled to a set top box and a remote control ..., (see col. 3, lines 21-24).

As per claims 13, 22, and 30, Schein, Tomitsuka, and Mueller disclose everything as claimed claims 1, 14 and 23. Schein fail to explicitly teach a system wherein the output device is a speech synthesizer that generates responses. However, this feature was well known in the art.

Tomitsuka discloses a system wherein the output device is a speech synthesizer that generates responses(see Fig. 1, block 19).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to use a voice synthesis module as taught by Tomitsuka in the system of

Schein, for the purpose of improving man-machine interaction, as suggested by Tomitsuka.

Claims 4-8, 17-19, and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Schein in view of Tomitsuka and Mueller, as applied to claims 1, 14, and 23 above, and

further in view of Haddock (US Patent No. 5,265,014).

As per claims 5, 18, and 27, the combination of Schein, Tomitsuka, and Mueller teach

everything as claimed in claims 1, 14, and 23. However, the combination fails to disclose

producing a select variable and a where variable from a query received from a user. However,

this feature was well known in the art.

In a similar field of endeavor, Haddock teaches the process of how an ambiguous query

is processed and syntactically analyzed to develop a representation of the syntactic structure.

The system produces a syntactic structure based upon a question/sentence format to represent a

set of questions, a set of nouns, a set of phrases, and a set of verbs. Additionally, at col. 6, lines

29-41 Haddock discloses that the system characterizes the query to find values of the variable

that fulfills the condition or question within the query. In the example provided by Haddock, the

query produced the syntactic structure (WHICH X s.t. (PAINT *REF(he) X)), and the request of

the query is to find any values of X that meet the condition of (PAINT *REF(he) X). The

condition (PAINT REF(he) X), is comprised of a semantic predicate PAINT and two variables,

the painter (REF(he)) and the painting (X), which reads on "produces a select variable and a where variable from a query received from a user."

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to modify the system of Schein to process the query into a syntactic structure with different variables, as taught by Haddock, for the purpose of characterizing the query to find values of the variable that fulfills the condition or question within the query.

As per claims 4, 6, 17, 19, 26, and 28, the combination of Schein, Tomitsuka, and Mueller teach everything as claimed in claims 1, 14, and 23. However, the combination fails to teach the implementation of historical information to modify the meaning from the users input query. However, this feature was well known in the art.

At col. 6, lines 48-60, Haddock discloses that in the example query, the meaning of the pronoun "he" is ambiguous and in order to resolve the ambiguity for further processing, the system uses the history of the dialog of a previous query to determine the reference to the "he", in order to form the completed query of (WHICH X s.t. (PAINT DEGAS X)), wherein the value of the *REF(he) is obtained from a previous query.

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to modify the system of Schein to implement historical information to modify the meaning of the input of the user's input query, as taught by Haddock, for the purpose of resolving the ambiguity in the input query.

As per claim 7, Schein, Tomitsuka, Mueller and Haddock teach everything as claimed in claim 6. However, Schein fails to teach determining whether the query includes both first and

second type of variable and if so, not using the historical information to modify the user's input query.

At col. 6, lines 39-59, Haddock discloses the functionality of the system for determining the meaning of an ambiguous query, in which the query representation contains the pronoun "he". The query is ambiguous because "it is not yet known who the pronoun "he" refers to because that information lies outside the query" (col. 6, lines 45-47). In this instance the system uses the history information to determine to whom "he" refers. However, if the utterance contains both of the attributes of the utterance, there is no ambiguous query and there is no need to use the history vector, as indicated in col. 5, lines 33-42, in which the query provided includes the names of the specific painter of whom a user wishes to retrieve information (query 1 and query 2), which reads on "determining whether the query includes both first and second type of variable and if so, not using the historical information to alter the meaning derived from the speech recognizer."

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to modify the system of Schein, to implement determining whether the query includes both a first and a second type of variable, for the purpose of reducing unnecessary processing if the meaning of the query can be ascertained.

As per claim 8, Schein, Tomitsuka, Mueller and Haddock teach everything as claimed in claim 6. However, Schein fails to teach determining whether the query includes only one of two variable types, and if so, using the historical information to modify the user's input query.

At col. 6, lines 39-59, Haddock discloses the functionality of the system for determining the meaning of an ambiguous query, in which the query representation contains the pronoun

"he". The query is ambiguous because "it is not yet known who the pronoun "he" refers to

because that information lies outside the query" (col. 6, lines 45-47). In this instance the system

uses the history information to determine to whom "he" refers. However, if the utterance

contains both of the attributes of the utterance, there is no ambiguous query and there is no need

to use the history vector, as indicated in col. 5, lines 33-42, in which the query provided includes

the names of the specific painter of whom a user wishes to retrieve information (query 1 and

query 2). At col. 6, line 13, Haddock specifically states that query 2 is ambiguous because of the

pronoun "he", and thus the system must resolve the ambiguity of the query via the history

information. At col. 7, lines 10-35, Haddock refers to the ambiguous fourth query from col. 5,

lines 42-44, in which "these" is used in the query. The system uses history information to

determine the reference of the set or subset of paintings "these" actually refers. Haddock's

determination of needing to use the history dialog to resolve an ambiguous query in one instance

or not needing to use a history dialog in another instance would suggest and/or motivate one of

ordinary skill in the art to specifically determine if an utterance includes all necessary variables.

Additionally, Haddock discloses in order to form the completed query of (WHICH X s.t.

(PAINT DEGAS X)), the value of the *REF(he) is obtained from a previous query, which reads

on "merge the variable with the historical information to derive a meaning from the request ."

Therefore, it would have been obvious to one of ordinary skill at the time of the

invention to modify the system of Schein to implement determining if an input query includes

only one of a type of variable, and if so using the history information to form a completed

query, as taught by Haddock, for the purpose of reducing ambiguity in the query, as suggested

by Haddock.

Claims 9-10, 20, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Schein in view of Tomitsuka and Mueller, as applied to claims 1, 14, and 23 above, and further

in view of Houser et al (US Patent No. 5,774,859).

As per claims 9-10, 20, and 29, the combination of Schein, Tomitsuka, and Mueller

teaches everything as claimed in claims 1, 14, and 23. However, the combination does not form

time attributes in a request. However, this feature was well known.

In a similar field of endeavor, Houser teaches an information system with a speech

interface which controls a device such as a television and access to broadcast information.

Specifically, at col. 30, lines 54-64 and col. 31, lines 39-43, Houser implements processing of

search requests for television broadcast information based on time ranges ("only within 4 hours"

or "only after eleven AM"). At col. 30, lines 56-58, Houser teaches that implementation of time

information commands will limit the search to programming information within an identified

range.

Therefore, it would have been obvious to one of ordinary skill at the time of the invention

to modify the system of Schein and implement time command information as taught by Houser,

for the purpose of limiting the search to programming information within an identified range,

and therefore decrease system response time and enhance system performance.

Claims 11 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Schein in view of Tomitsuka and Mueller, as applied to claims 1 and 14 above, and further in

view of well known prior art.

As per claims 11 and 21, Schein, Tomitsuka, and Mueller disclose everything as claimed in claims 1 and 14. Schein fails to explicitly teach a system including a processor coupled to the speaker and a microphone, the output of said speaker being subtracted from the output of said microphone to reduce interference. However, subtracting undesired signals from a speech signal input to a microphone was well known in the art.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to subtract the output of the speaker from the input of the microphone, as was well known in the art, for the purpose of improving the operation of the system by reducing interference, and thereby improving the performance and accuracy of the speech recognizer.

(11)   Response to Argument

After the Final Rejection, the Examiner was requested to provide references in support of the position that subtracting undesired signals from a speech signal input to a microphone was well known in the art, as applied in the rejection of claim 11. In the Advisory Action, the Examiner cited references in support of the teaching. Applicant argues none of the references cited have anything whatsoever to do with the claimed invention because the references do not cancel the audio portion of a television program to avoid interference with spoken commands and specifically have nothing to do with speech recognition whatsoever. In response to applicant's argument that the cited references provided are of nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977

F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Finn, for instance, implements an

echo canceling scheme by subtracting signals output from a loudspeaker from speech signals

input to the microphone, thereby removing undesired noise and reducing interference. Thus, the

prior art reference is pertinent to the invention, and the rejection is proper.

At page 5 of the Brief, Applicant argues there was no effort to cite any rationale from

within the references, which would support their combination. Applicant is referred to Finn col.

1, lines 36-40; col. 3, lines 45-51; and col. 4, lines 58-63, in which Finn specifically describes an

echo canceling scheme via subtracting signals output from a loudspeaker from speech signals

input to the microphone, thereby removing undesired noise and reducing interference. Thus, as

indicated in the Final Rejection and rejection above, subtracting the output of the speaker from

the input of the microphone, as was well known in the art as taught by Finn, for the purpose of

improving the operation of the system by reducing interference, and thereby improving the

performance and accuracy of the speech recognizer, requires ordinary skill in the art.

At page 5 and 6 of the Brief, Applicant argues the rejection amounts to the application of

hindsight reasoning and is plainly improper. In response to applicant's argument that the

examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be

recognized that any judgment on obviousness is in a sense necessarily a reconstruction based

upon hindsight reasoning. But so long as it takes into account only knowledge which was within

the level of ordinary skill at the time the claimed invention was made, and does not include

knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In

re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Angela A. Armstrong
Examiner
Art Unit 2654

AAA
January 25, 2004

RICHEMOND DORVIL
SUPERVISORY PATENT EXAMINER

Conferees

Vijay Chawan
Primary Examiner

Richmond Dorvil
Supervisory Patent Examiner

TIMOTHY N TROP
TROP PRUNER HU & MILES P C
8554 KATY FREEWAY
STE 100
HOUSTON, TX 77024